AMENDMENTS TO THE CLAIMS

1. (Previously presented) A radar system comprising:

reception-signal-strength-distribution detector which transmits a beam of detection radio waves having a predetermined azimuth width extending from the left to the right of a predetermined azimuth at the center, receives a reflected wave from a target, changes a central azimuth of the beam, and detects the distribution of reception signal strengths at predetermined angular intervals and for each predetermined distance; and

target-central-azimuth detector which detects an azimuth corresponding to a vertex of an approximate isosceles triangle as a central azimuth of the target on the basis of a beam azimuth width and reception signal strengths at two azimuths that are a central-azimuth-detecting azimuth width away from each other and located on the left and right of an azimuth corresponding to a maximum value in the reception signal strength distribution within a distance to the target, the approximate isosceles triangle having the beam azimuth width as its base and having two points representing the reception signal strengths on its two oblique sides when the reception signal strength distribution associated with changes in azimuth is expressed in rectangular coordinates.

2. (Currently amended) The radar system according to Claim 1, wherein the target-central-azimuth detector further [[comprises]] defines a plurality of central-azimuth-detecting azimuth widths, detects an azimuth corresponding to a vertex of an approximate isosceles triangle with respect to each of the central-azimuth-detected azimuth widths, and performs weighted averaging on the detected azimuths.

3. (Previously presented) A radar system comprising:

reception-signal-strength-distribution detector which transmits a beam of detection radio waves having a predetermined azimuth width extending from the left to the right of a predetermined azimuth at the center, receiving a reflected wave from a target, changes a central azimuth of the beam, and detects the distribution of reception signal strengths at predetermined angular intervals and for each predetermined distance; and

target-central-azimuth detector which detects an azimuth corresponding to a vertex of an approximate isosceles triangle as a central azimuth of the target on the basis of a beam azimuth width, a reception signal strength at an azimuth corresponding to a maximum value in the reception signal strength distribution within a distance to the target, and a higher reception signal strength of two reception signal strengths at two azimuths that are respectively separated by a central-azimuth-detecting azimuth width to the left and right sides from the azimuth corresponding to the maximum value, the approximate isosceles triangle having the beam azimuth width as its base and having two points representing the reception signal strengths on its two oblique sides when the reception signal strength distribution associated with changes in azimuth is expressed in rectangular coordinates.

4. (Previously presented) A radar system comprising:

reception-signal-strength-distribution detector which transmits a beam of detection radio waves having a predetermined azimuth width extending from the left to the right of a predetermined azimuth at the center, receives a reflected wave from a target, changes a central azimuth of the beam, and detects the distribution of reception signal strengths at predetermined angular intervals and for each predetermined distance; and

target-central-azimuth detector which detects an azimuth corresponding to a vertex of an approximate isosceles triangle as a central azimuth of the target on the basis of reception signal strengths at a plurality of azimuths that are predetermined central-azimuth-detecting azimuth widths away from and are located on the left and right sides of an azimuth corresponding to a maximum value in the reception signal strength distribution within a distance to the target, the approximate isosceles triangle having a plurality of points representing the reception signal strengths at the plurality of azimuths on its two oblique sides when the reception signal strength distribution associated with changes in azimuth is expressed in rectangular coordinates.

5. (Currently amended) The radar system according to Claim 4, further comprising a processor that is programmed with software to determine [[which,]] if the length of the base of the approximate isosceles triangle is smaller than the beam azimuth width of a main lobe of the beam, and if this condition is true, to cause [[causes]] an azimuth corresponding to the vertex of the approximate isosceles triangle not to be treated as a central azimuth of the target.

6. (Previously presented) A radar system comprising:

reception-signal-strength-distribution detector which transmits a beam of detection radio waves having a predetermined azimuth width extending from the left to the right of a predetermined azimuth at the center, receives a reflected wave from a target, changes a central azimuth of the beam, and detects the distribution of reception signal strengths at predetermined angular intervals and for each predetermined distance; and

target-central-azimuth detector which detects an azimuth corresponding to a vertex of an approximate isosceles triangle as a central azimuth of the target on the basis of a reception signal strength at an azimuth corresponding to a maximum value in the reception signal strength distribution within a distance to the target and also, on the basis of a lower reception signal strength of two reception signal strengths at two azimuths that are respectively separated by a central-azimuth-detecting azimuth width to the left and right sides from the azimuth corresponding to the maximum value or a plurality of reception signal strengths at a plurality of azimuths located on the same side as the azimuth corresponding to the lower reception signal strength, the approximate isosceles triangle having a plurality of points representing the reception signal strengths on one of its oblique sides and having the beam azimuth width as its base, when the reception signal strength distribution associated with changes in azimuth is expressed in rectangular coordinates.

7. (Previously presented) A radar system comprising:

reception-signal-strength-distribution detector which transmits a beam of detection radio waves having a predetermined azimuth width extending from the left to the right of a predetermined azimuth at the center, receives a reflected wave from a target, changes a central azimuth of the beam, and detects the distribution of reception signal strengths at predetermined angular intervals and for each predetermined distance; and

target-central-azimuth detector which detects an azimuth corresponding to a vertex of an approximate isosceles triangle as a central azimuth of the target on the basis of a reception signal strength at an azimuth corresponding to a maximum value in the reception signal strength distribution within a distance to the target and one or a plurality of reception signal strengths at one or a plurality of azimuths that are one or a plurality of central-azimuth-detecting azimuth widths

inside, left or right, the azimuth corresponding to the maximum value, the approximate isosceles triangle having a plurality of points representing the reception signal strengths on one of its oblique sides and having the beam azimuth width as its base when the reception signal strength distribution associated with changes in azimuth is expressed in rectangular coordinates.

8. (Previously presented) A radar system comprising:

reception-signal-strength-distribution detector which transmits a beam of detection radio waves having a predetermined azimuth width extending from the left to the right of a predetermined azimuth at the center, receives a reflected wave from a target, changes a central azimuth of the beam, and detects the distribution of reception signal strengths at predetermined angular intervals and for each predetermined distance; and

target-central-azimuth detector which detects an azimuth corresponding to a vertex of an approximate isosceles triangle as a central azimuth of the target, if an azimuth at which a reception signal reaches its maximum value is located at an end, left or right, of a detection azimuth angle range, and if a first condition that the ratio of an azimuth width obtained by subtracting a central-azimuth-detecting azimuth width from half the beam azimuth width to half the beam azimuth width is smaller than the ratio of a reception signal strength at an azimuth that is a central-azimuth-detecting azimuth width inside, left or right, an outermost azimuth corresponding to a maximum value in the reception signal strength distribution within a distance to the target to the outermost azimuth corresponding to the maximum value is satisfied, on the basis of the signal strength at the outermost azimuth corresponding to the maximum value, the reception signal strength at the azimuth that is a central-azimuth-detecting azimuth width inside the outermost azimuth, and the beam azimuth width, the approximate isosceles triangle having the beam azimuth width as its base and having two points representing the reception signal strengths on its two oblique sides when the reception signal strength distribution associated with changes in azimuth is expressed in rectangular coordinates, and if the first condition is not satisfied, on the basis of a reception signal strength at an azimuth corresponding to a maximum value in the reception signal strength distribution within a distance to the target and one or a plurality of reception signal strengths at one or a plurality of azimuths that are one or a plurality of central-azimuth-detecting azimuth widths inside, left or right,

the azimuth corresponding to the maximum value, the approximate isosceles triangle having a plurality of points representing the reception signal strengths on one of its oblique sides and having the beam azimuth width as its base when the reception signal strength distribution associated with changes in azimuth is expressed in rectangular coordinates.

9. (Previously presented) The radar system according to Claim 7, further comprising reception-signal-strength-distribution corrector which subtracts, if the reception signal strength distribution within a distance to the target extends further than the beam azimuth width in the azimuth direction, a distribution corresponding to the isosceles triangle having the azimuth of the target detected by the target-central-azimuth detecting means as its vertex and having the beam azimuth width as its base from the reception signal strength distribution.

10. (Previously presented) The radar system according to Claim 9, wherein the reception-signal-strength-distribution corrector sequentially subtracts a distribution for the isosceles triangle corresponding to a target whose central azimuth is detected from the reception signal strength distribution.

11. (Previously presented) The radar system according to Claim 9, wherein the reception-signal-strength-distribution detector varies the central azimuth of the beam within a detection azimuth angle range, and the target-central-azimuth detector further varies the central-azimuth-detecting azimuth width according to an azimuth corresponding to a maximum value in the reception signal strength distribution within a distance to the target.

12. (Previously presented) The radar system according to Claim 6, further comprising reception-signal-strength-distribution corrector which subtracts, if the reception signal strength distribution within a distance to the target extends further than the beam azimuth width in the azimuth direction, a distribution corresponding to the isosceles triangle having the azimuth of the target detected by the target-central-azimuth detecting means as its vertex and having the beam azimuth width as its base from the reception signal strength distribution.

13. (Previously presented) The radar system according to Claim 12, wherein the reception-signal-strength-distribution corrector sequentially subtracts a distribution for the isosceles triangle corresponding to a target whose central azimuth is detected from the reception signal strength distribution.

14. (Previously presented) The radar system according to Claim 11, wherein the reception-signal-strength-distribution detector varies the central azimuth of the beam within a detection azimuth angle range, and the target-central-azimuth detector further varies the central-azimuth-detecting azimuth width according to an azimuth corresponding to a maximum value in the reception signal strength distribution within a distance to the target.

15. (Previously presented) The radar system according to Claim 8, wherein the reception-signal-strength-distribution detector varies the central azimuth of the beam within a detection azimuth angle range, and the target-central-azimuth detector further varies the central-azimuth-detecting azimuth width according to an azimuth corresponding to a maximum value in the reception signal strength distribution within a distance to the target.

16. (Previously presented) The radar system according to Claim 7, wherein the reception-signal-strength-distribution detector varies the central azimuth of the beam within a detection azimuth angle range, and the target-central-azimuth detector further varies the central-azimuth-detecting azimuth width according to an azimuth corresponding to a maximum value in the reception signal strength distribution within a distance to the target.

17. (Previously presented) The radar system according to Claim 6, wherein the reception-signal-strength-distribution detector varies the central azimuth of the beam within a detection azimuth angle range, and the target-central-azimuth detector further varies the central-azimuth-detecting azimuth width according to an azimuth corresponding to a maximum value in the reception signal strength distribution within a distance to the target.

18. (Previously presented) The radar system according to Claim 3, wherein the reception-signal-strength-distribution detector varies the central azimuth of the beam within a detection azimuth angle range, and the target-central-azimuth detector further varies the central-azimuth-detecting azimuth width according to an azimuth corresponding to a maximum value in the reception signal strength distribution within a distance to the target.

19. (Previously presented) The radar system according to Claim 2, wherein the reception-signal-strength-distribution detector varies the central azimuth of the beam within a detection azimuth angle range, and the target-central-azimuth detector further varies the central-azimuth-detecting azimuth width according to an azimuth corresponding to a maximum value in the reception signal strength distribution within a distance to the target.

20. (Previously presented) The radar system according to Claim 1, wherein the reception-signal-strength-distribution detector varies the central azimuth of the beam within a detection azimuth angle range, and the target-central-azimuth detector further varies the central-azimuth-detecting azimuth width according to an azimuth corresponding to a maximum value in the reception signal strength distribution within a distance to the target.